



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,472	01/28/2004	Hisaaki Kura	100725-00113	9425

4372 7590 04/14/2005

ARENT FOX KINTNER PLOTKIN & KAHN
1050 CONNECTICUT AVENUE, N.W.
SUITE 400
WASHINGTON, DC 20036

EXAMINER

BINDA, GREGORY JOHN

ART UNIT	PAPER NUMBER
----------	--------------

3679

DATE MAILED: 04/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/765,472

Applicant(s)

KURA ET AL.

Examiner

Greg Binda

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/698,243.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3679

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-11 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1 & 5 each recite that the claimed invention comprises a trunnion having an outer periphery that is both convex-spherical and straight. Applicant has not pointed out where this structure is supported, nor does there appear to be a written description of the structure in the application as originally filed.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 & 5 each recite that the claimed invention comprises a trunnion having

Art Unit: 3679

an outer periphery that is both convex-spherical and straight. It is not clear how a periphery can be both convex-spherical and straight at the same time.

Claim Rejections - 35 USC § 102

6. Claims 1 & 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Bensinger et al, US 5,167,583 (Bensinger).

a. Claim 1. Figs. 1 & 2 show a constant velocity universal joint comprising: an outer joint member 1 having an inner periphery provided with three axial track grooves 2, axial roller guideways 15, 25 being arranged on both sides of each track groove; a tripod member 3 having three radially projecting trunnions 4; and a roller assembly 6-8 mounted on each of the trunnions 4 of the tripod member, the roller assembly being capable of tilting movement (see also “angularly movable” in col. 1, line 18) with respect to the trunnion and having a roller 8 to be guided along the roller guideways 15, 25 in a direction parallel to the axis of the outer joint member 1, wherein each component part of the joint has a softening resistance characteristic value. Figs. 1 & 2 show the roller assembly comprises a support ring 6 mounted on the convex-spherical outer periphery of the portion 5 of the trunnion; and the support ring 6 has a cylindrical inner periphery 20. Figs. 1 & show that the outer periphery of the trunnion 4 includes: a portion 11 that is straight in longitudinal section and a portion 5 that makes contact with the inner periphery of the support ring 6. Figs 1 & 2 show a clearance between the outer periphery portion 11 of the trunnion 4 and the support ring 6.

Art Unit: 3679

- b. Claim 10. Fig. 6c shows the trunnion 4 includes a portion 11 that has an elliptic shape having a major axis perpendicular to the axis of the joint.

Claim Rejections - 35 USC § 103

7. Claims 2-9 & 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bensinger.

a. Claims 2-4. Bensinger shows a constant velocity universal joint comprising a steel component part, but does not expressly disclose that the steel has a carbon content of 0.15-0.40% by weight and a Vickers surface hardness value (R) falling within the range of $705 \leq R \leq 820$. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have steel having a carbon content of 0.15-0.40% by weight and a Vickers surface hardness value (R) falling within the range of $705 \leq R \leq 820$, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Kulling*, 897 F.2d 1147, 14 USPQ2d 1056.

b. Claim 5, 6 & 11 Bensinger shows a constant velocity universal joint comprising all the limitations of the claims but does not expressly disclose one of the component parts comprising a material characterized by carbide in a martensite matrix. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make a component part from a material characterized by carbide in a martensite matrix, since it has been held to be within the general skill of a worker in the art to select

a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

- i. Claim 7. Bensinger shows a constant velocity universal joint comprising a steel component part, but does not expressly disclose that the steel has a carbon content of 0.80% by weight or higher. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have steel having a carbon content of 0.80% by weight or higher for the same reason noted in item 'a' above.
- ii. Claim 8. See item 'a' above.
- iii. Claim 9. Bensinger shows a constant velocity universal joint comprising a component part, but does not expressly disclose the component part within the range of HRC 60-68 surface hardness. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the component part within the range of HRC 60-68 surface hardness for the same reason noted in item 'a' above.

Response to Arguments

8. Applicant's arguments filed Feb. 22, 2005 have been fully considered but they are not persuasive. Applicant argues that in Bensinger, the "trunnion 5" lacks an outer periphery that is straight. That may be so, but in spite of that, Bensinger anticipates the claims because, as noted above, Figs. 1 & 2 show a trunnion 4 that includes a portion 11 with an outer periphery that is straight.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

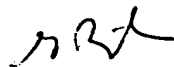
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Binda whose telephone number is (571) 272-7077. The examiner can normally be reached on M-F 9:30 am to 7:00 pm with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3679

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system; contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Greg Binda
Primary Examiner
Art Unit 3679